

FIG. 1

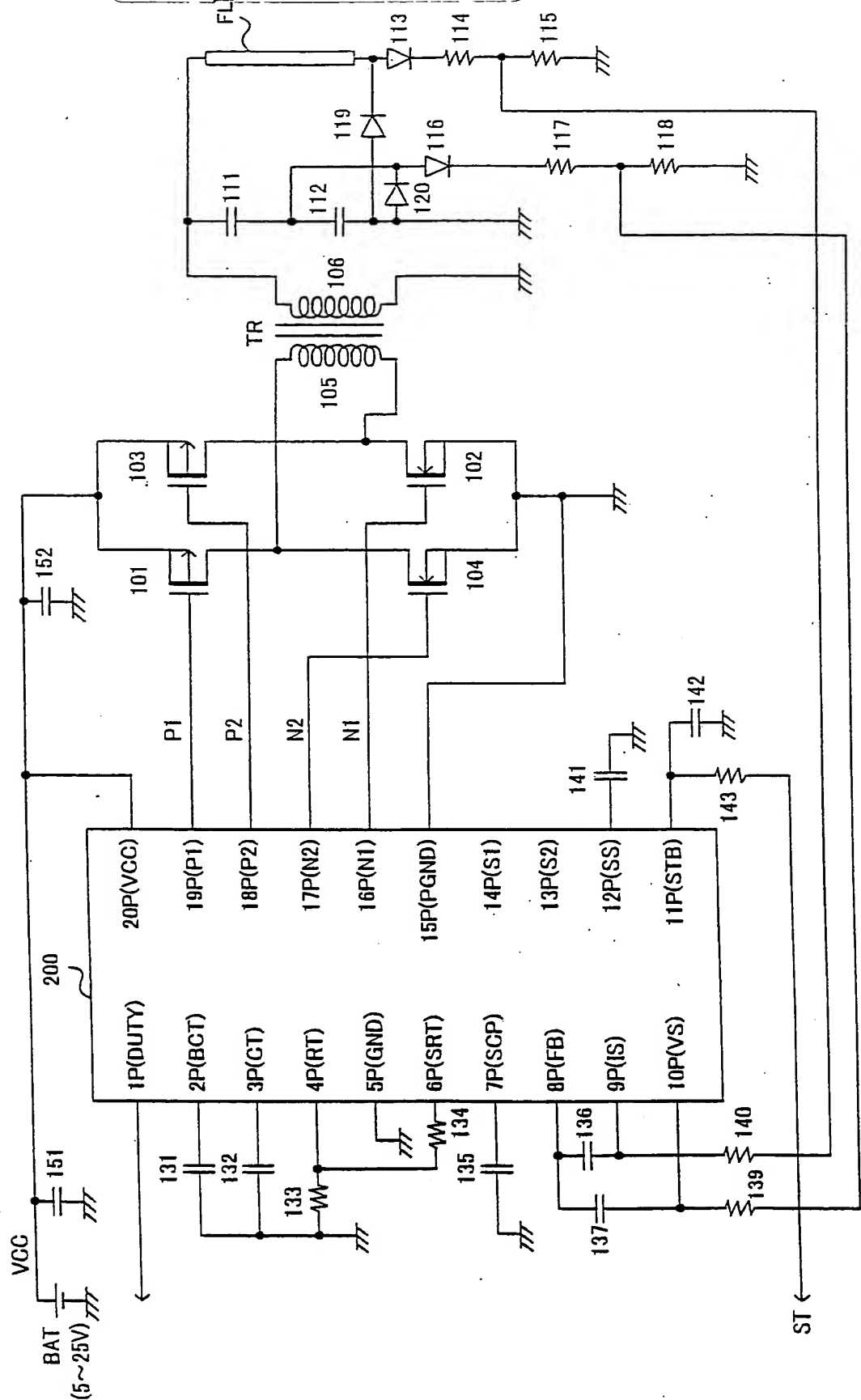
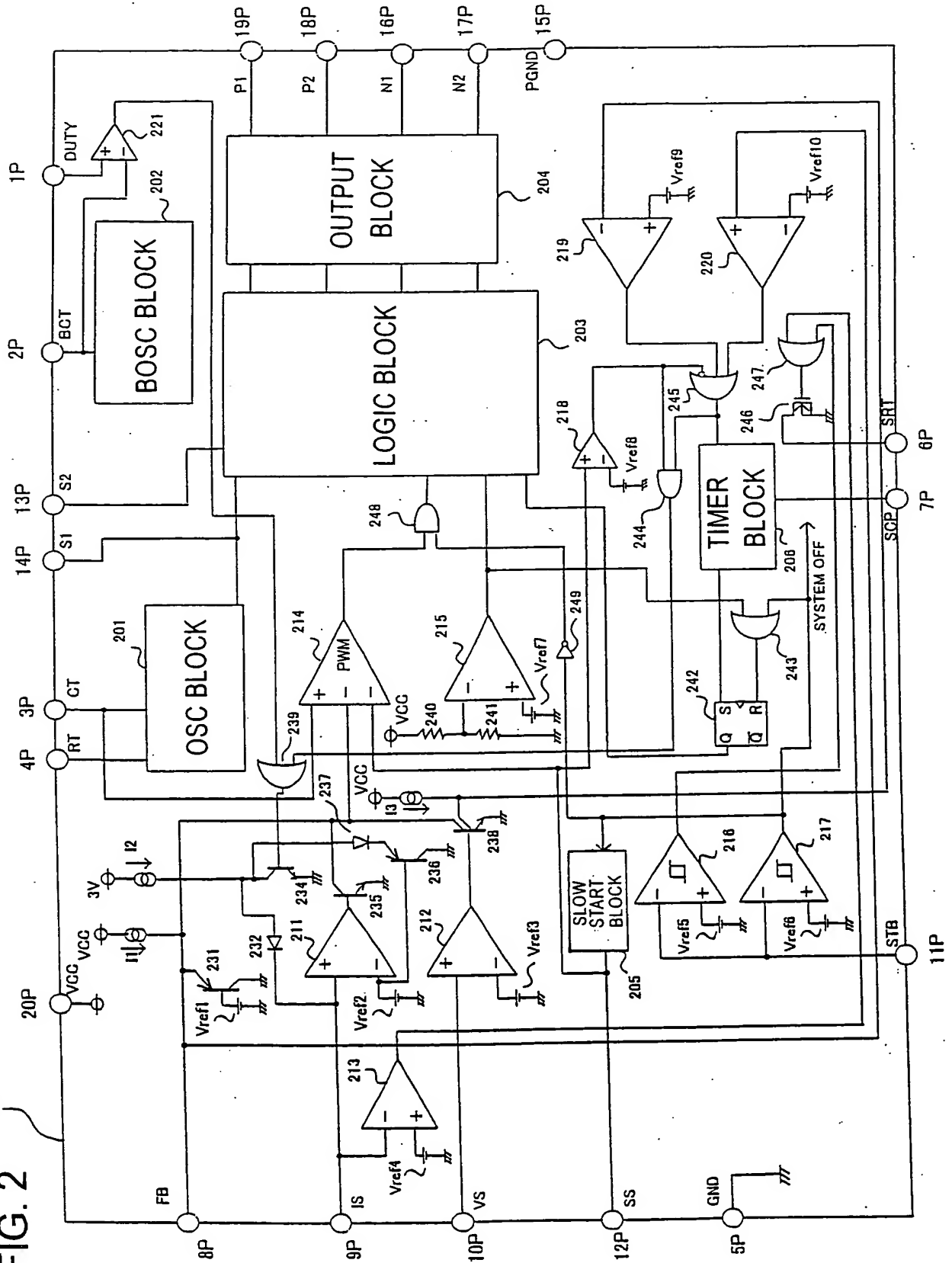


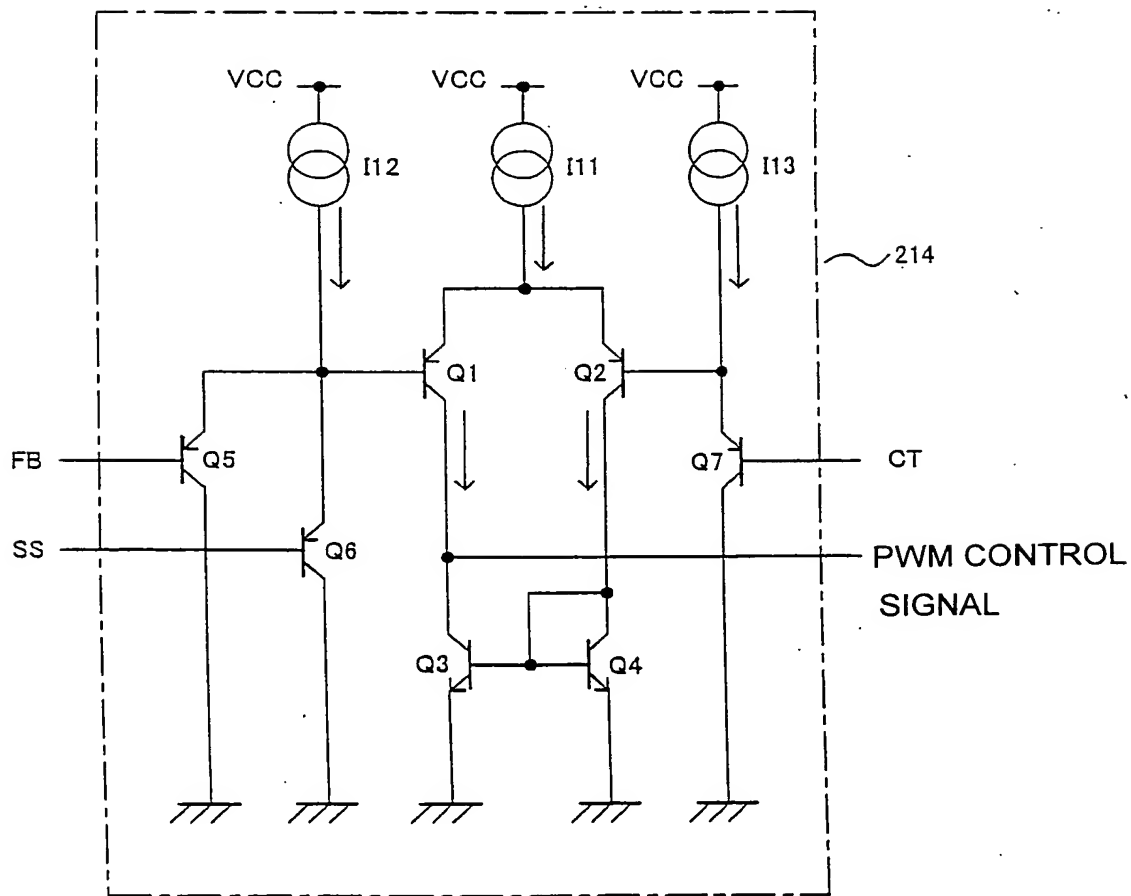
FIG. 2



The diagram shows a power supply circuit with the following components and connections:

- Input and Output:** The input is V_{CC} and the output is V_o . The load current is I_o .
- Feedback Network:** A feedback signal FB is taken from the output V_o through a resistor 139 and a capacitor 137 . This signal is fed into the non-inverting input (+) of op-amp 211 .
- Reference and Compensation:** A reference voltage V_{ref1} is applied to the inverting input (-) of op-amp 211 through a resistor 136 . A compensation capacitor 231 is connected between the inputs of op-amp 211 . The output of op-amp 211 drives the gate of a MOSFET 235 , which sources a current I_S from the input V_{CC} .
- Slow Start Block:** A "SLOW START BLOCK" (205) receives a signal ST (indicated by a dashed line) and provides a control signal SS to the inverting input (-) of op-amp 212 .
- Feedback and Error Amplifier:** The feedback signal FB is also fed into the non-inverting input (+) of op-amp 212 . The output of op-amp 212 drives the gate of a MOSFET 238 , which sources a current I_o from the input V_{CC} through a resistor 140 .
- Control and Timing:** An "OSC BLOCK" (201) is connected to the input V_{CC} through a resistor 133 and a capacitor 132 . It also receives a control signal CT from the output of the PWM block (214). The output of the PWM block (214) is connected to the inverting input (-) of op-amp 212 and the gate of MOSFET 238 .
- Power MOSFETs:** MOSFETs 235 and 238 are used to regulate the input current I_S and the output current I_o , respectively.
- Other Blocks:** A "PULSE WIDTH MODULATOR" (214) receives a control signal SS from the slow start block and a feedback signal FB from the output. It generates a PWM signal that drives the gates of MOSFETs 235 and 238 . The PWM block (214) is connected to a "PULSE WIDTH MODULATOR" (203) and a "PULSE WIDTH MODULATOR" (204) through a resistor 214 .

FIG. 4



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FIG. 5 (a)

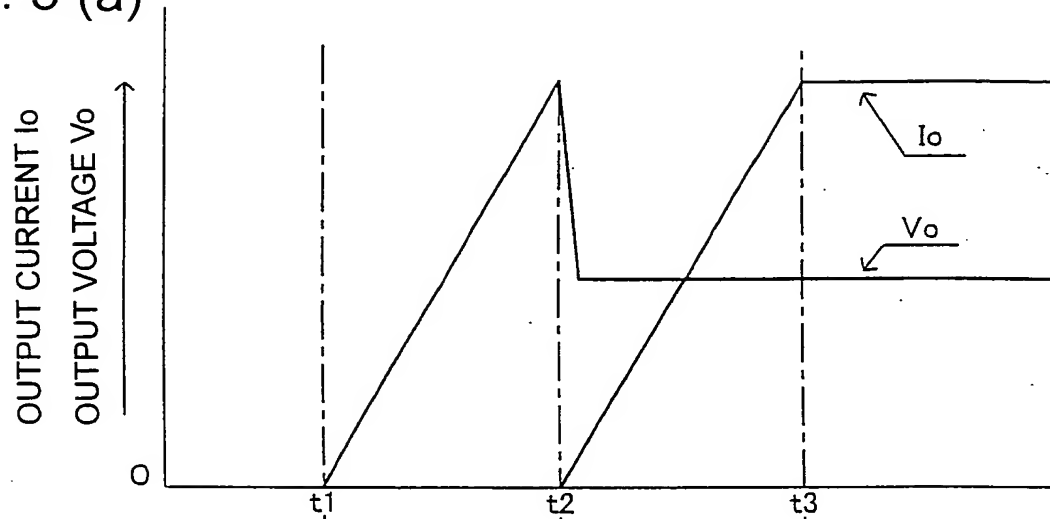


FIG. 5 (b)

